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Frequently asked questions (FAQ): drug overdose deaths in Europe

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Introduction

This page provides answers to the questions most often asked about drug overdose deaths in Europe. Also known as drug-induced deaths, they are deaths directly attributable to the use of illicit drugs. The information presented here is based on the latest data from the Member States of the European Union ⁽¹⁾ and the EMCDDA affiliates Norway and Turkey. It draws on contributions from specialists from these countries, as well as on information provided by European countries in the annual reporting exercise to the agency.

The latest European Drug Report (EMCDDA, 2022a) estimated that over 5 800 deaths involving one or more illicit drugs were reported in 2020 in the European Union. This estimate rises to more than 6 400 deaths when Norway and Turkey are included. Men accounted for three quarters of drug-induced deaths. All of these deaths were premature, predominantly affecting people in their thirties and forties.

Opioids, often heroin, were involved in more than three quarters of the drug-induced deaths reported in Europe, although this is not true for all countries. Opioids used in substitution treatment can also be found in post mortem analyses in some countries. Deaths related to medications, such as oxycodone and tramadol, are also reported. Deaths associated with fentanyl and its analogues are rarely reported and might be underestimated in some countries. Deaths related to stimulants such as cocaine and amphetamines have been reported in recent years in several countries. Most deaths involve polydrug use. .

¹
(→) The United Kingdom left the European Union on 31 January 2020 and is not included in the overall analysis presented here.

Aim and objectives

This page aims to raise awareness on the nature and scale of the drug overdose deaths problem in Europe. This topic does not receive sufficient attention, despite the high number of lives lost, the dramatic consequences for families and communities and the fact that all of these deaths are, in principle, preventable and avoidable. Enhancing the monitoring and responses to drug-related deaths are also a priority of the European Union Drugs Action Plan 2020-25. These pages pull together the most recent epidemiological data and highlight the gaps in the information available in this area across Europe.

We are publishing this page to mark International Overdose Awareness Day on 31 August 2022, thereby contributing to the EMCDDA's [broader public health initiatives \(/publications/topic-overviews/prevention-drug-related-deaths\)](#).

What this page contains

This page contains up-to-date information on overdose deaths in Europe, focusing on the demographics (who is dying) and the time trends. It also summarises the common situations that increase the risk of overdose (risk factors for overdose) and highlights current main concerns. Finally, background information is given on the methodology, the sources of information and their limitations, together with references and links to resources.

Questions

Pick a question below to jump straight to its answer.

Overdose situation

What is a drug-induced death?

How many people die every year in Europe?

What is the most recent data available on overdose?

Are the numbers of drug-induced deaths similar across different countries?

Is the drug-induced deaths rate (deaths/population) similar across countries?

Are there differences between the genders across countries?

How has the distribution of drug-induced deaths among age groups changed in recent years?

Is the age distribution of drug-induced deaths similar across different countries?

What substances are involved in drug-induced deaths?

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Methodology

Where do the data come from?

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What sources of information are used in different countries?

What is the preferred source of data chosen by the countries to show the details of the cases in EMCDDA publications?

Are the data comparable among countries?

How do we measure the overall and the cause-specific mortality rates related to drug use?

→ **Overdose situation**

Overdose situation

What is a drug-induced death?

Overdose or drug-induced deaths are monitored by the EMCDDA under the 'Drug-related deaths and mortality (DRD)' epidemiological indicator. This has two complementary components:

- drug-induced deaths: regular national, population-based statistics on deaths directly attributable to the use of drugs (also known as poisonings or overdoses). In many publications and documents, the term 'drug-related deaths' is used, although strictly speaking this term is more inclusive);
- drug-related mortality: estimations of the overall and cause-specific mortality among high-risk drug users, based on follow-up longitudinal ad-hoc studies.

Case definition

For the purpose of the EMCDDA regular national statistics, drug-induced deaths are those 'happening shortly after consumption of one or more illicit psychoactive drugs and directly related to this consumption, although they may often happen when such substances are taken in combination with other substances, such as alcohol or psychoactive medicines'.

Exclusion criteria

Deaths for which a drug has been found in the toxicological analysis but in which this drug did not have a causal or determinant role in the death are not included in the EMCDDA statistics. This may happen when a toxicological analysis is undertaken in certain investigations (e.g. traffic accidents, suicides and violence). Deaths that are indirectly related to drugs are also excluded from the regular national statistics of 'drug-induced' or 'overdose' deaths (e.g. deaths related to HIV/AIDS acquired through injecting drugs).

More information

More information is presented in the methodology section at the end of this document, and also in the [methods pages](https://www.emcdda.europa.eu/data/stats2021/drd) (<https://www.emcdda.europa.eu/data/stats2021/drd>) of the EMCDDA Statistical Bulletin, and in the EMCDDA European DRD protocol (EMCDDA, 2010). The protocol establishes harmonised criteria to collect data and report figures, based on the information available in different mortality registries, at the end point of the chain of certification/ascertainment procedures.

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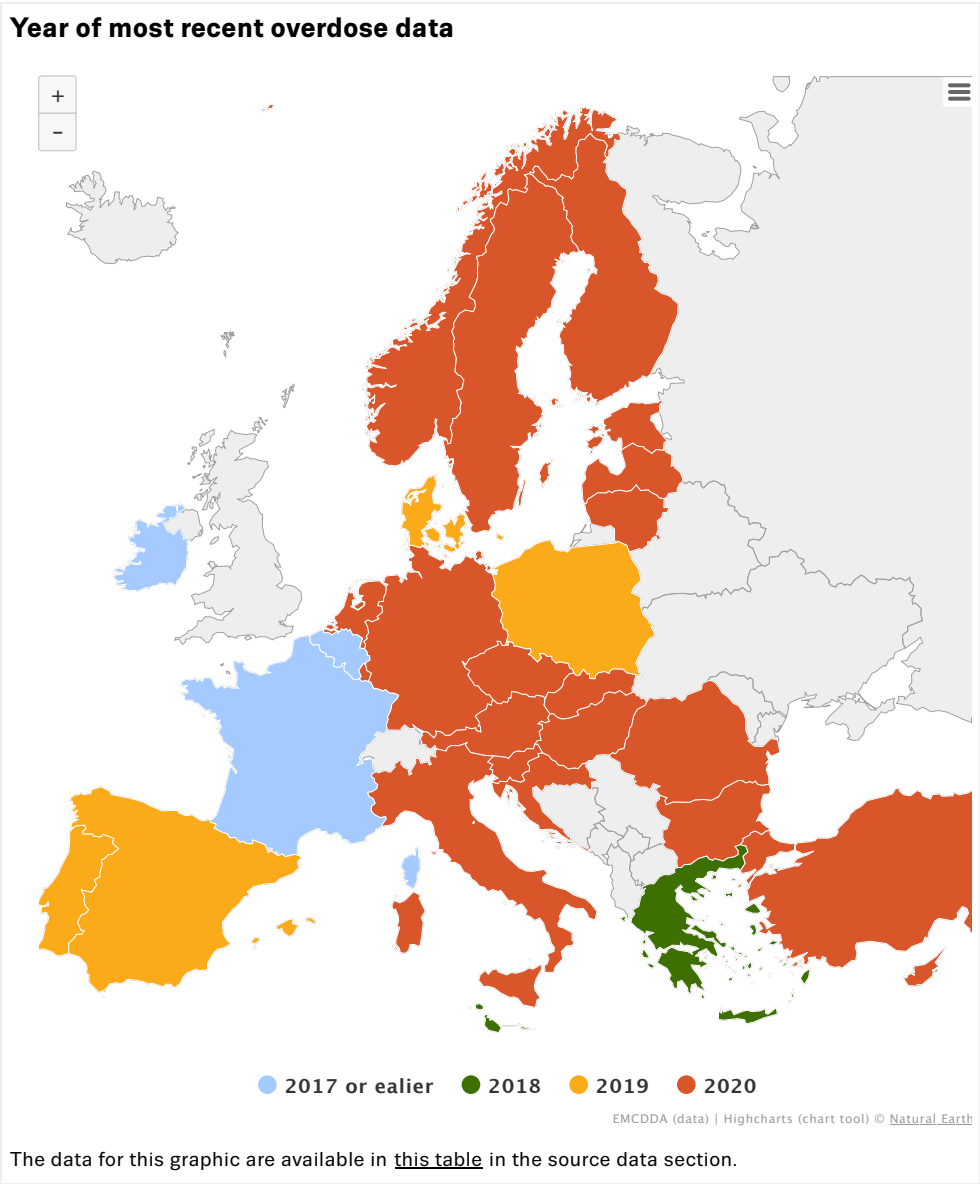
How many people die every year in Europe?

It is estimated that at least 5 800 overdose deaths occurred in the European Union in 2020. This rises to an estimated 6 400 deaths if Norway and Turkey are included, representing a slight increase compared with the 2019 figure of

about 6 200. These overall numbers must be understood as underestimations, as there are limitations to drug-induced deaths data, particularly to European cumulative totals. Data for 2020 are not available for all countries, and for those cases (9 of the 29 countries in the EU, Norway and Turkey), the most recent available data may be used to estimate the overall European figures.

What is the most recent data available on overdose?

In 20 of the 29 countries (EU, Norway and Turkey) the 2020 data from the preferred source is available. The year of the most recent data available for the other countries is 2019 in Denmark, Spain, Poland and Portugal; 2018 in Greece and Malta; 2017 in Belgium and Ireland and 2016 in France.

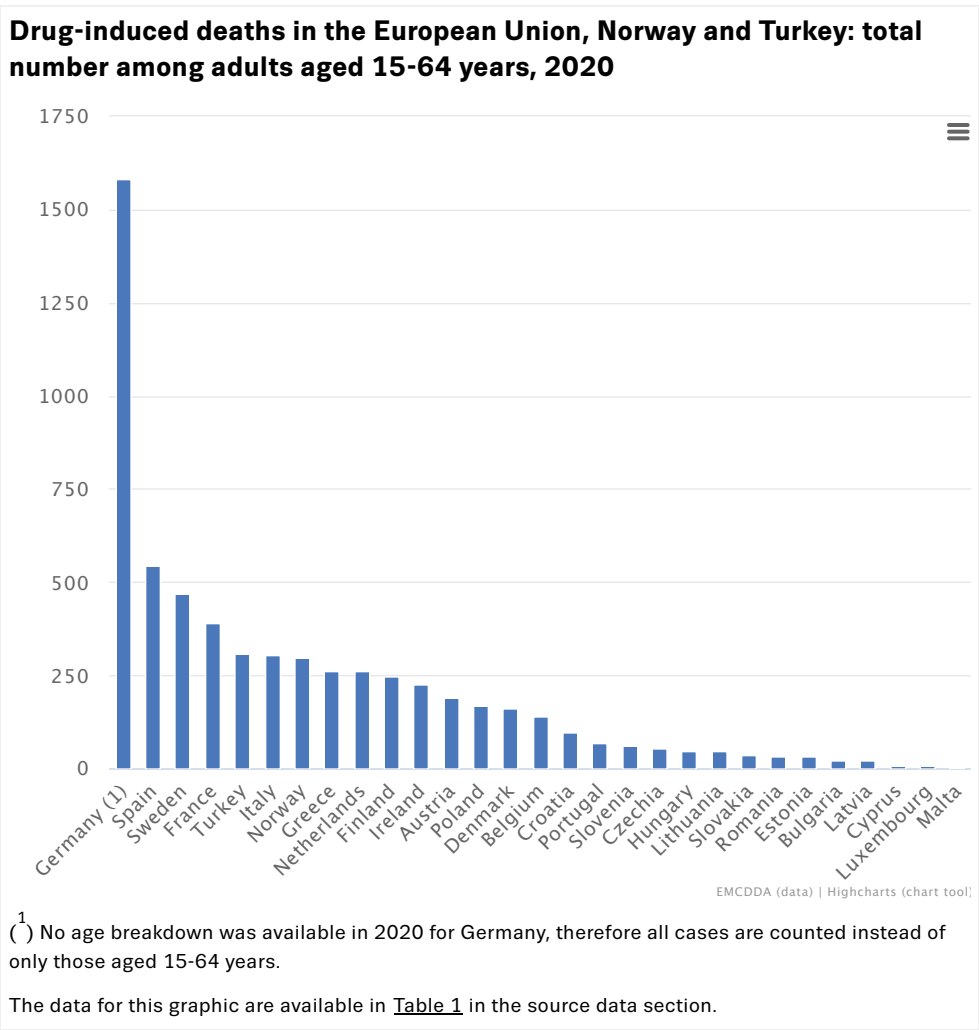


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Are the numbers of drug-induced deaths similar across different countries?

Germany, Sweden, Spain and France together account for half (48 %) of the European total number of drug-related deaths in 2020. This relates partly to the size of the at-risk populations in these countries, but also to under-reporting in certain other countries. Following Germany, Spain, Sweden and France, the next highest numbers of deaths were reported by Turkey, Italy and Norway (see figure below).

There are also differences within countries, with some regions and cities much more affected than others.

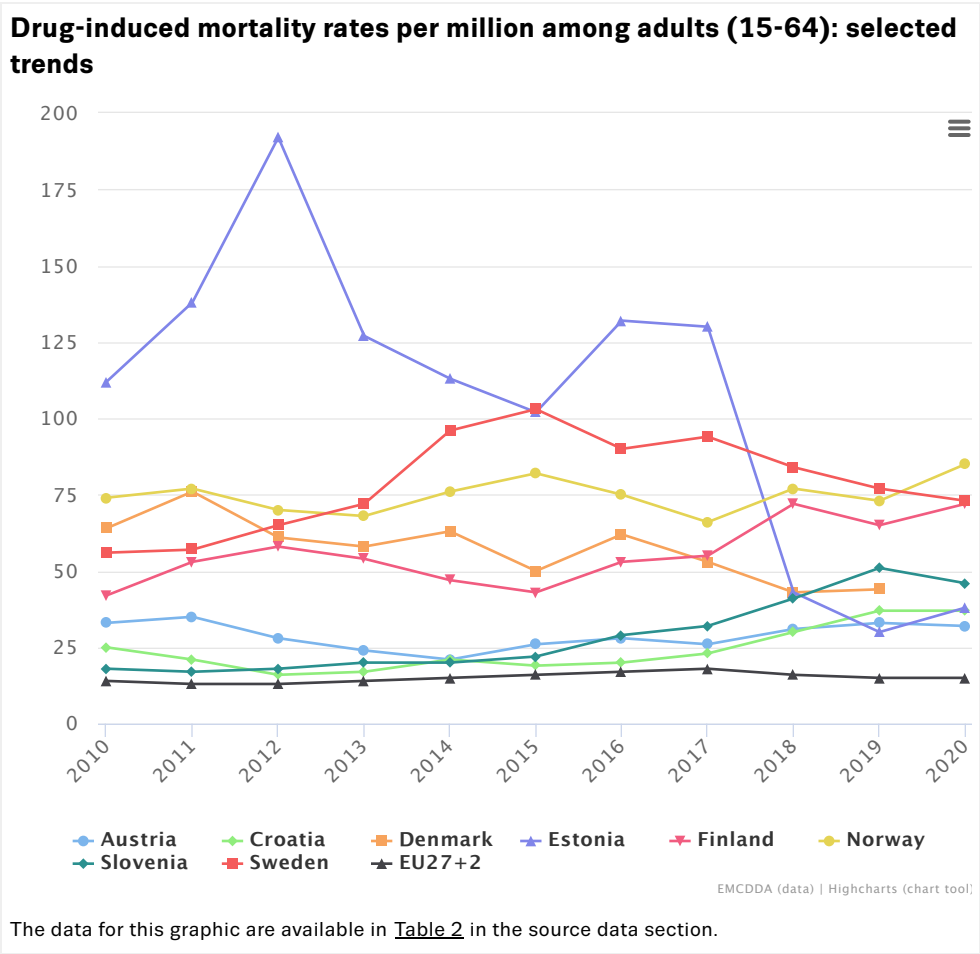


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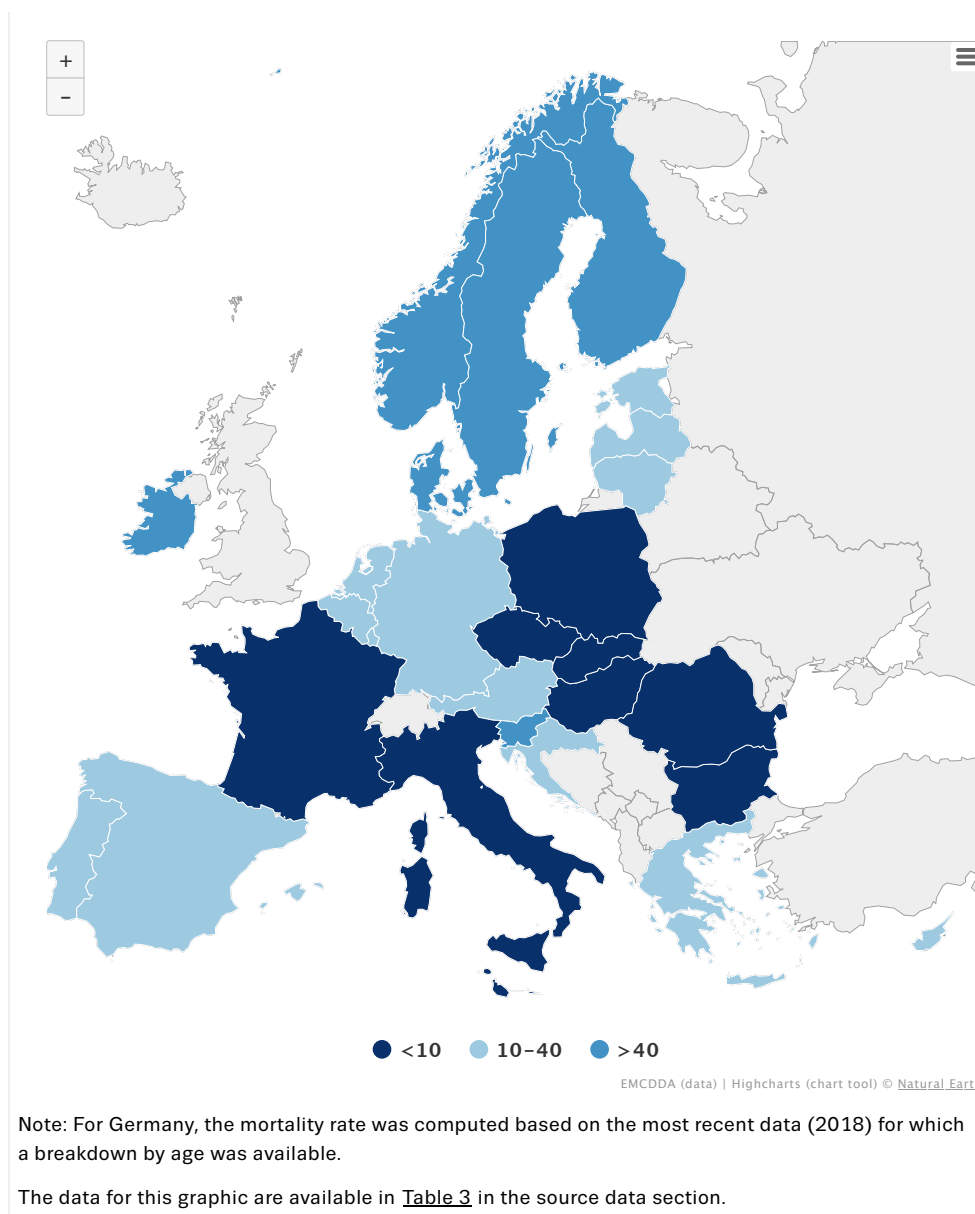
Is the drug-induced deaths rate (deaths/population) similar across countries?

The mortality rate due to drug overdoses in Europe in 2020 was estimated to be 15 deaths per million in the population aged 15-64 years, but this varied across countries, with higher rates observed in countries in the north and east of Europe (see map and trend chart below).

Comparisons between countries should be made with caution though because of under-reporting in some countries (see the section on [methods](#)).



Drug-induced mortality rates per million among adults (15-64)

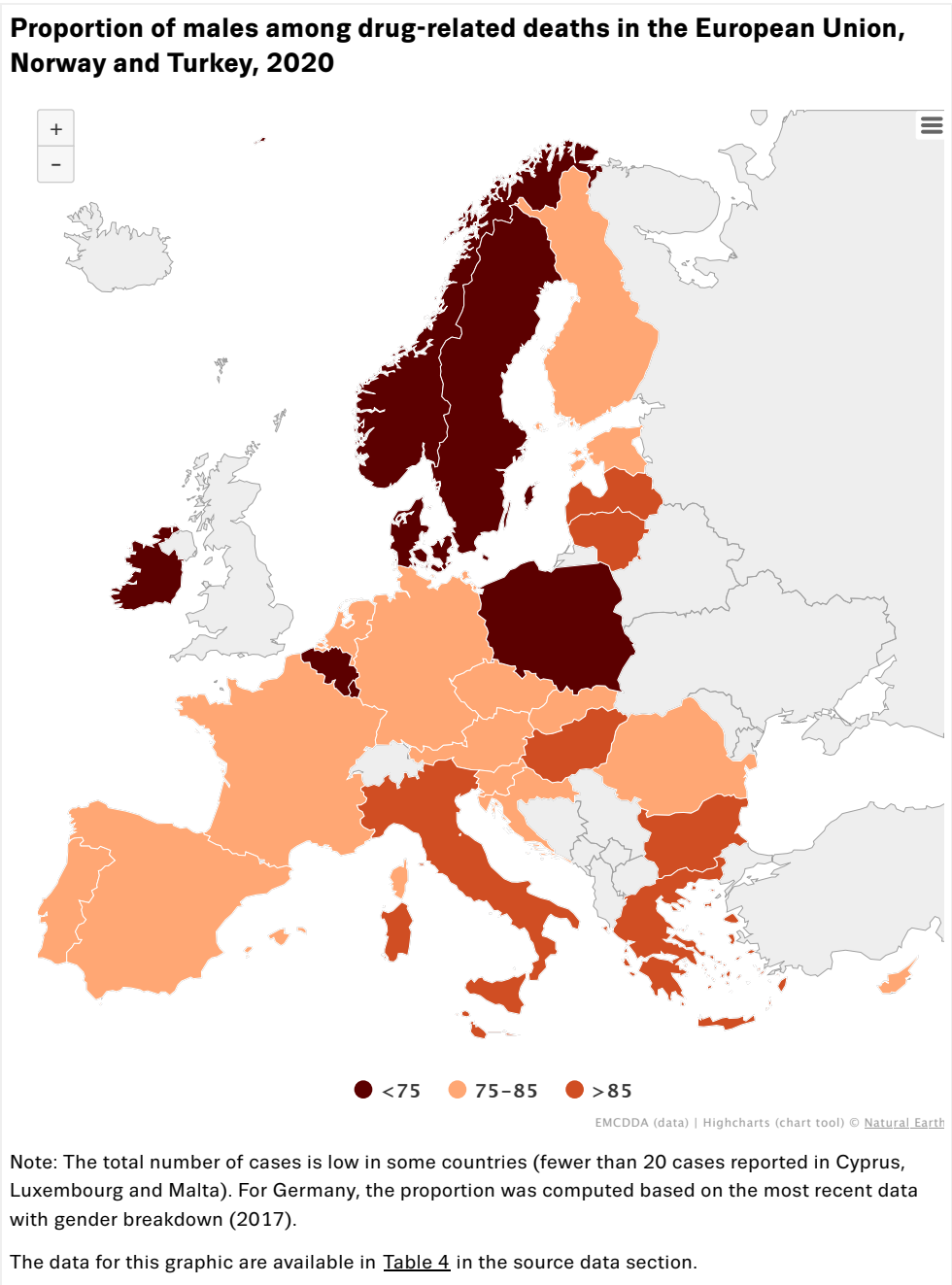


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Are there differences between the genders across countries?

Men represent overall the majority of drug-induced deaths in Europe (79 %). The current distribution of drug-induced deaths between men and women varies between countries, with the proportion of male deaths higher in the south and east of Europe, compared with the north and west of Europe (see figure below). This difference might relate to a range of factors including the proportion of men among people who are using drugs, and varying drug use patterns by gender across regions. Besides differences in gender distribution, there are different age-distributions of the cases of drug-induced deaths

across Europe; with some countries in the north of Europe reporting deaths among older women (including those who have died from use of prescription pills), while some countries in the south of Europe report high numbers of deaths among younger men using illicit drugs (see the section below on [age differences](#)).



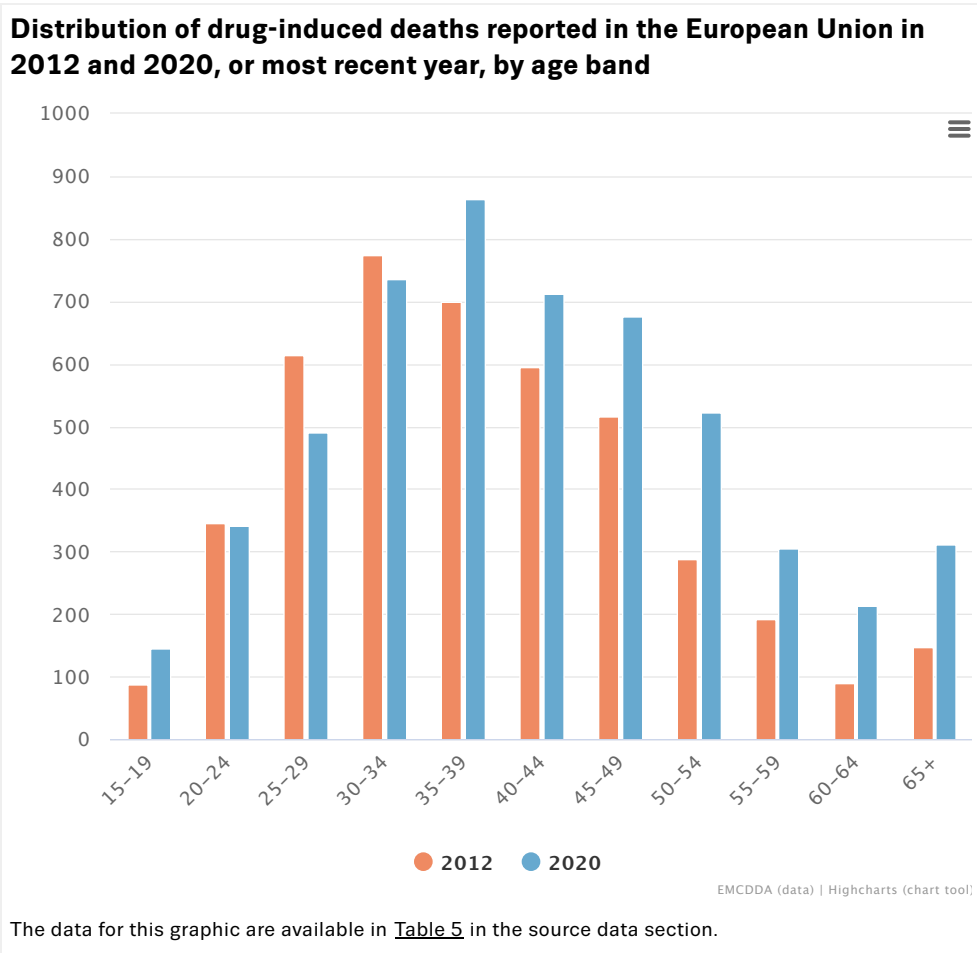
Drug-induced deaths predominantly affect men: a mortality rate of 20.8 cases per million males compared with 5.4 cases per million women. Among men, those aged 35-39 were the most affected, with a mortality rate of 36 deaths per million. Among women, those aged 35-39 were the most affected, with a mortality rate of 7.5 deaths per million.

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How has the distribution of drug-induced deaths among age groups changed in recent years?

Comparing the number of deaths over a longer time period, overdose deaths in the European Union have been increasing since 2012, overall and among teenagers and all age categories above 35 (see figure below), with the 82 % increase among the 50-64 age group particularly high. This reflects the ageing nature of Europe’s opioid-using population in most countries. It is important because older high-risk drug users may be at the greatest risk of drug overdose death.

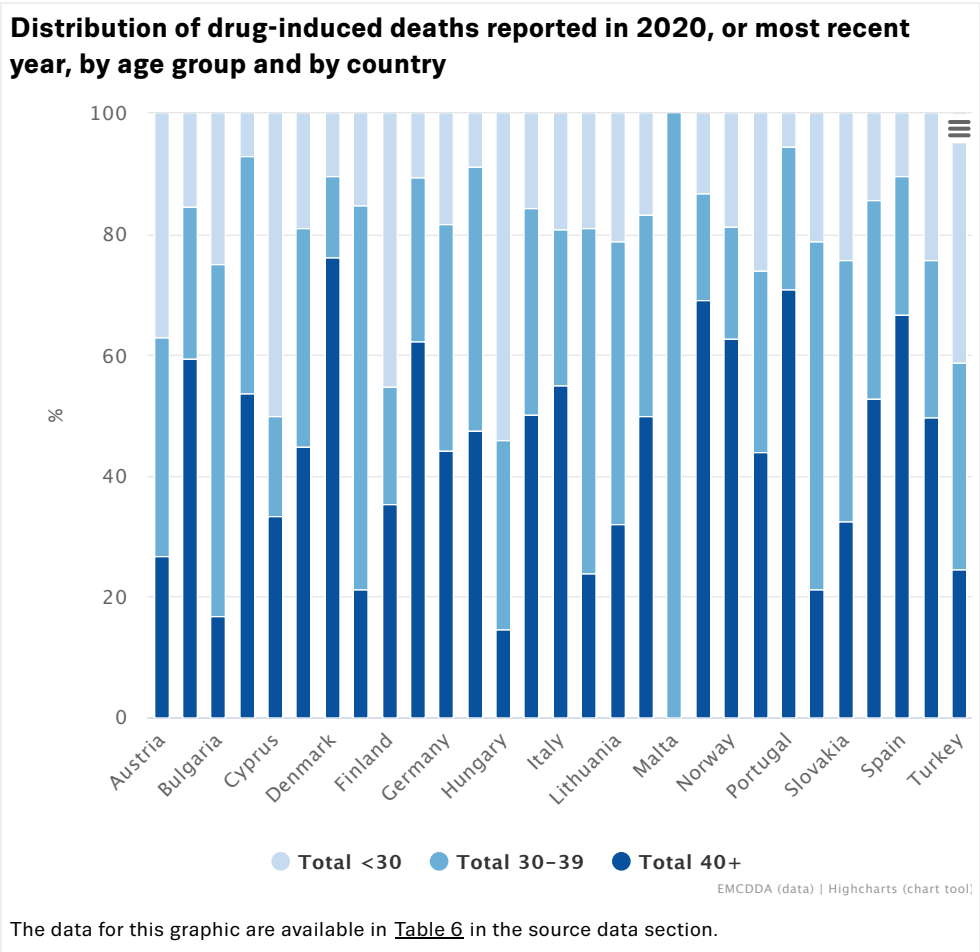
In 2020, the overall mean age at death due to overdose was 41 years, compared with 36 years in 2012.



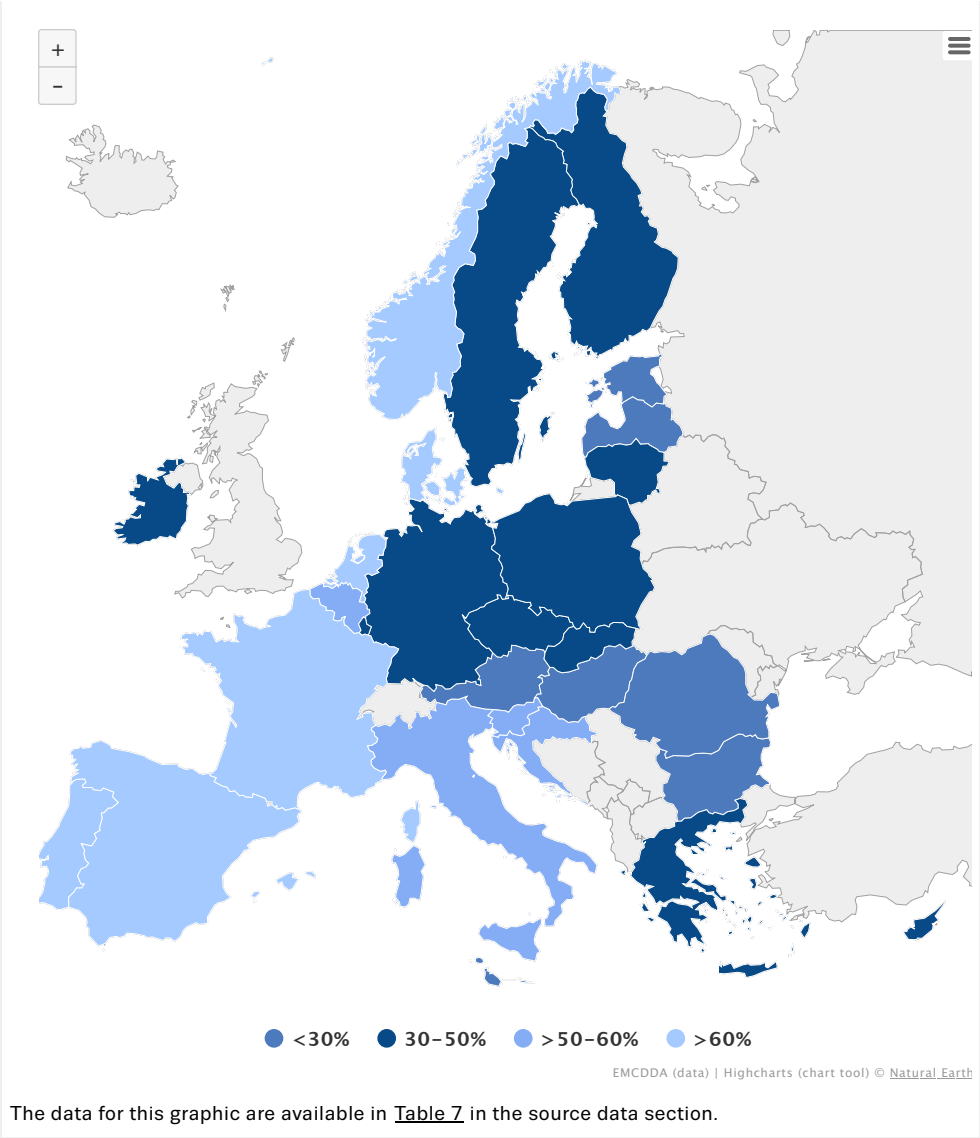
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Is the age distribution of drug-induced deaths similar across different countries?

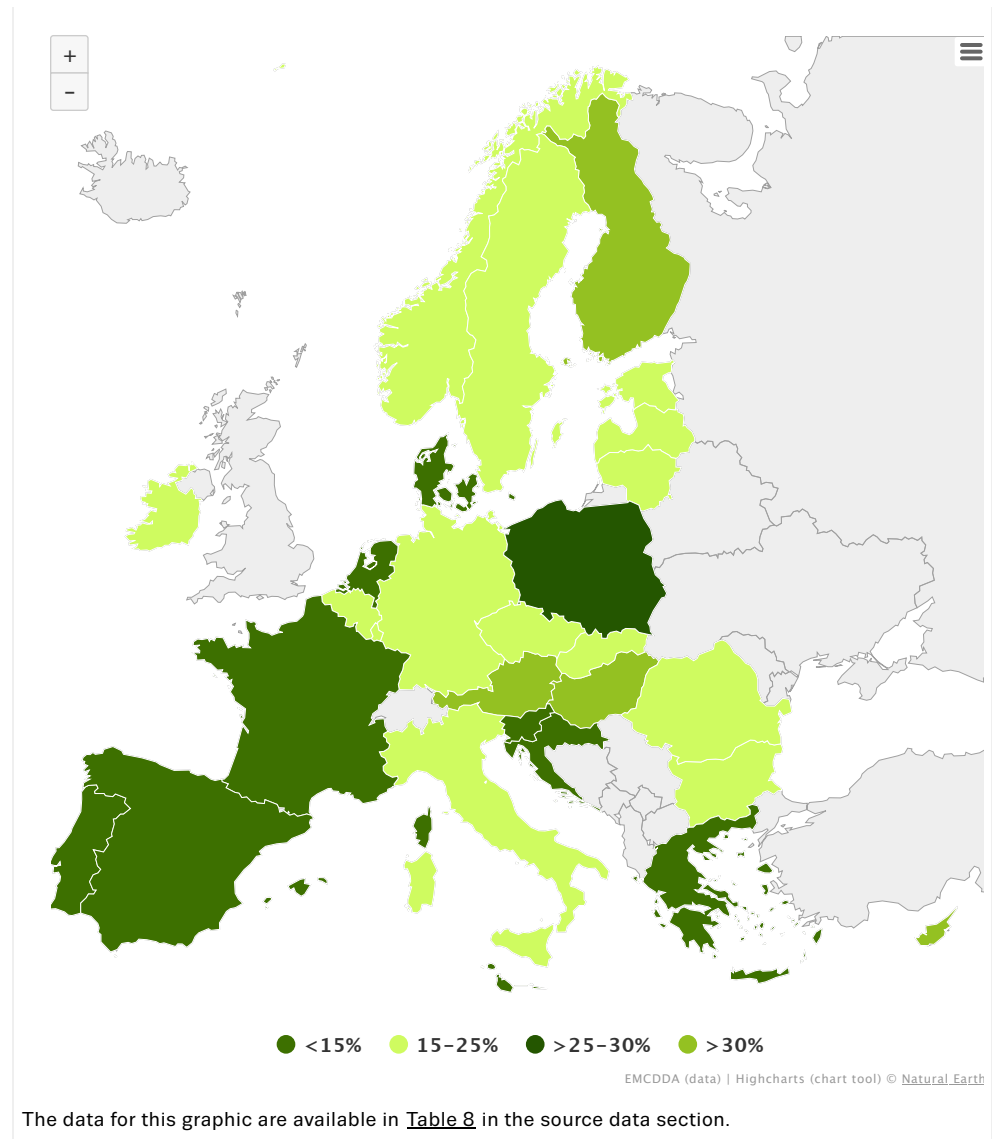
There are differences between countries in the age distribution of drug-induced deaths (see bar chart below). Countries in the west of Europe tend to have an older age profile among overdose deaths than countries in the east (see maps below). This mirrors, in part, the ageing populations of opioid users (including ageing users of illicit opioids, typically heroin; and also in some countries, people using prescription opioids, such as oxycodone) in western countries.



Proportion of drug-induced deaths among older (40+ years) people in the European Union, Norway and Turkey, 2020 (or most recent data available)



Proportion of drug-induced deaths among younger (under 30 years) people in the European Union, Norway and Turkey, 2020 (or most recent data available)



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What substances are involved in drug-induced deaths?

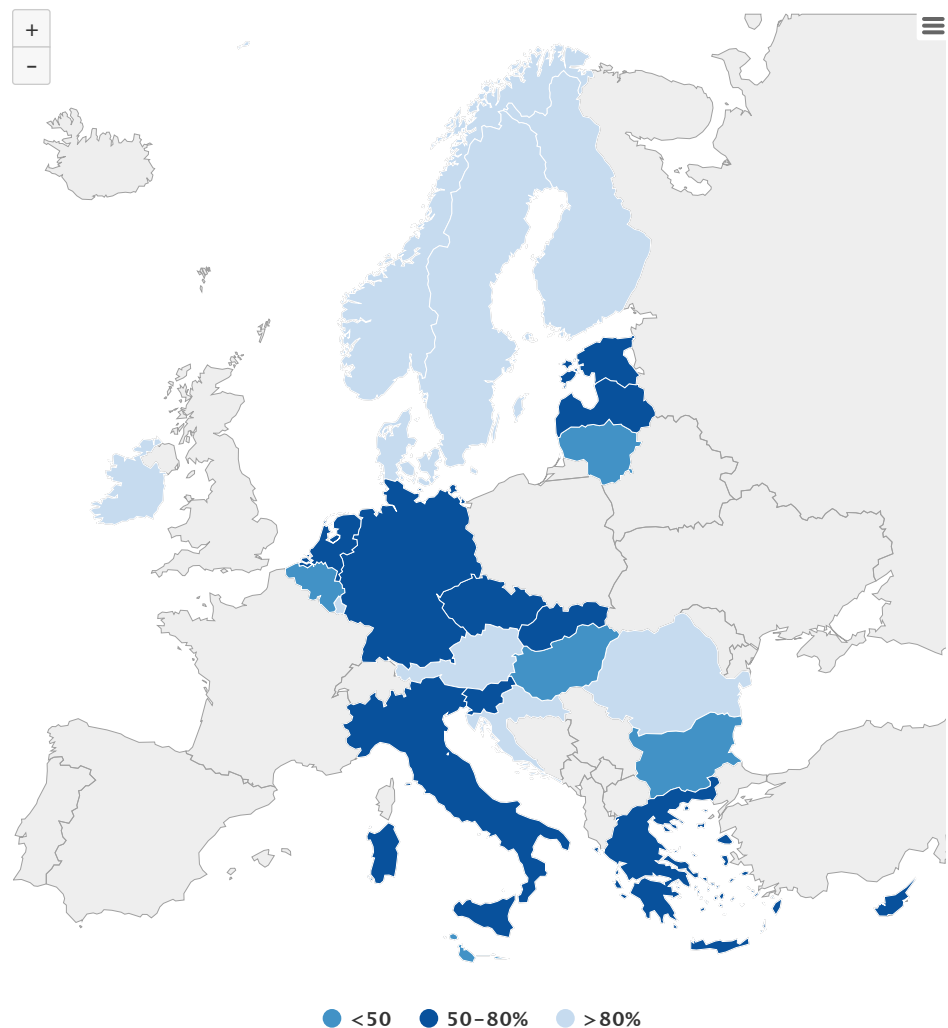
Opioids, mainly heroin or its metabolites, often in combination with other substances, are present in the majority of fatal overdoses reported in Europe. In most drug-induced deaths, more than one substance is detected, indicating polydrug use ²(-).

Overall, opioids are involved in 74 % of cases reported in the European Union, with large differences across countries (see map below). More than 8 in 10 overdose deaths involved opioids in countries in the north of Europe (Ireland, Norway, Finland and Sweden), as well as in Austria, Croatia and Romania.

In some countries, no or limited data are reported on the post mortem toxicology findings. Furthermore, in several countries, some cases are reported with 'unknown or unspecified' toxicology, in particular when there are several drugs involved. Most of these cases involve at least an opioid. The proportion of cases with opioids involved shown here is a minimum estimate.

In Belgium, Bulgaria, Hungary, Lithuania, Malta and Turkey, less than half of cases involved opioids. Although limited information is reported in some countries, most cases appear to involve polydrug drug use. Detailed information on toxicology findings is available in few countries: in Turkey, the substances most often involved in overdose deaths are mainly synthetic cannabinoids, MDMA and amphetamines; in Hungary, the substances most often involved in overdose deaths are new psychoactive substances; and in Czechia, most cases involve amphetamines.

Proportion of drug-induced deaths with opioids involved in the European Union, Norway and Turkey, 2020 (or most recent data available)



EMCDDA (data) | Highcharts (chart tool) © Natural Earth

Note: Although information on toxicology is not available for data reported through the general mortality registers (preferred source) in France, Spain, Portugal and Poland, data from the alternative source (forensic special mortality registers) suggest that most drug-induced deaths in these

countries involved opioids.

The data for this graphic are available in [Table 9](#) in the source data section.

Stimulants such as cocaine, MDMA, amphetamines and cathinones are implicated in overdose deaths in Europe, although their significance varies by country. More information is available for some countries in the latest European Drug Report (EMCDDA, 2022a), and a recent report points to an increase in the number of deaths related to cocaine (EMCDDA, 2018).

A recent review of MDMA-related deaths in Australia and Europe showed an increase of the numbers of these deaths in Australia and all the three European countries (Finland, Portugal and Turkey) participating in the study (Roxburgh et al., 2021).

Deaths associated with new psychoactive substances are a cause of concern. A review published in 2021, and based on the reports to the EMCDDA of drug-induced deaths from the EU countries as well as Norway, Turkey and the United Kingdom, found that in 2017, one in six drug-related deaths in these countries involved new psychoactive substances, and the proportion and numbers increased from 2016 levels (López-Pelayo et al., 2021). However, three quarters of the cases were concentrated in only two countries and involved a small number of substances. In 2016 and 2017, 73 % and 77 % of the cases were concentrated in the United Kingdom and Turkey, related mainly to etizolam – a ‘new benzodiazepine’ – generally together with opioids and synthetic cannabinoids respectively. In Turkey, there has been a decrease in the number of deaths after the peak reached in 2017. To fully understand the public health implications of new psychoactive substances, further monitoring of drug-induced deaths linked to these substances and their distribution in Europe is needed.

²
(–) ‘Polydrug use’ is a term to describe the use of more than one drug or type of drug by an individual, either at the same time or sequentially. It encompasses use of both illicit drugs and legal substances, such as alcohol and medicines (EMCDDA, 2017).

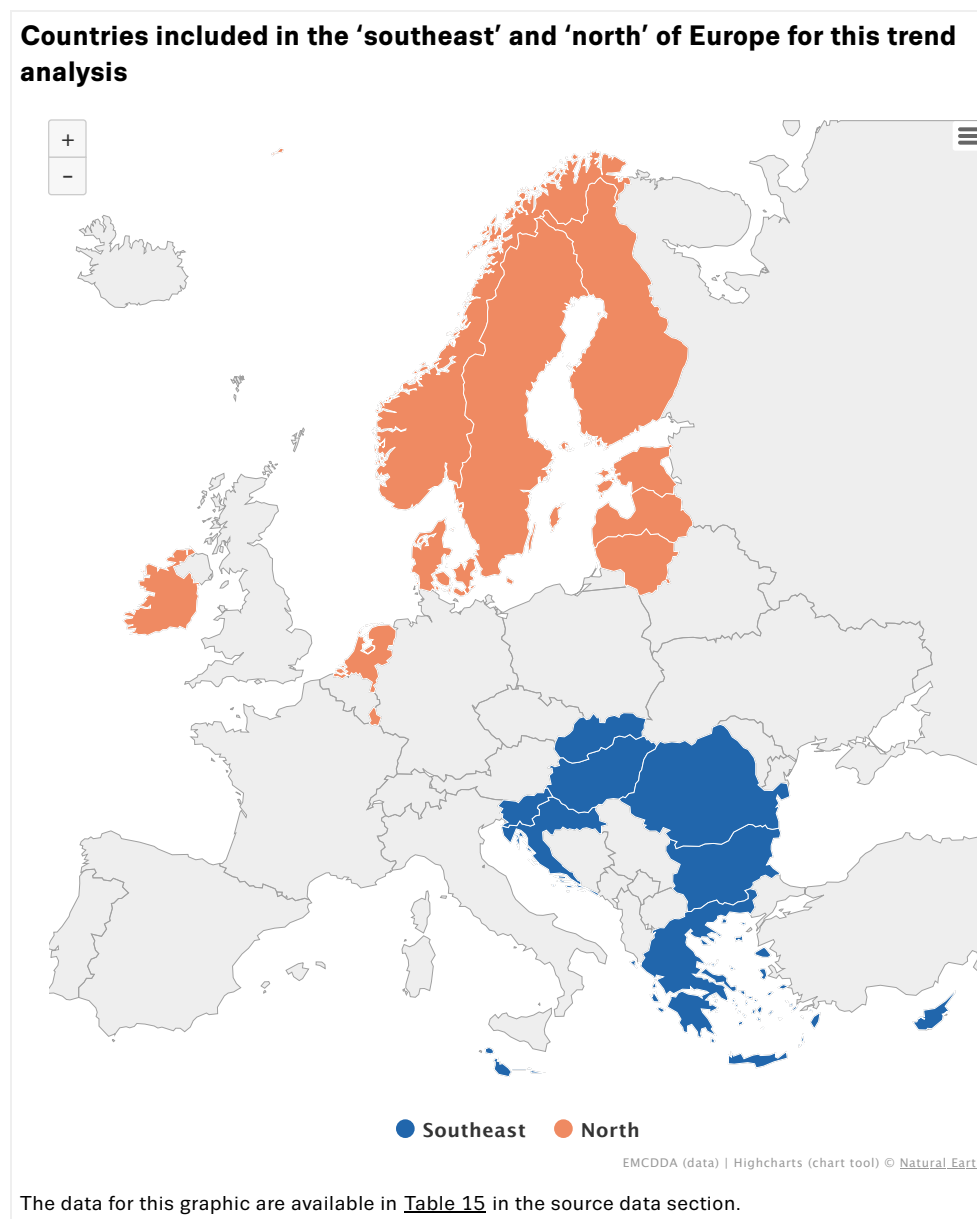
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Where have numbers of drug-induced deaths increased over the last 10 years?

Data on fatal overdoses, especially the European cumulative total, must be interpreted with caution. Among the reasons for this are systematic under-reporting in some countries, differences in the ways toxicological examinations are conducted and registration processes that can result in reporting delays. Annual estimates therefore represent a provisional value.

Country numbers and trends vary across Europe, but they should also be interpreted with caution. The section below presents selected countries. Countries from the southeast and from the north of Europe are presented

separately (as indicated in the map below).

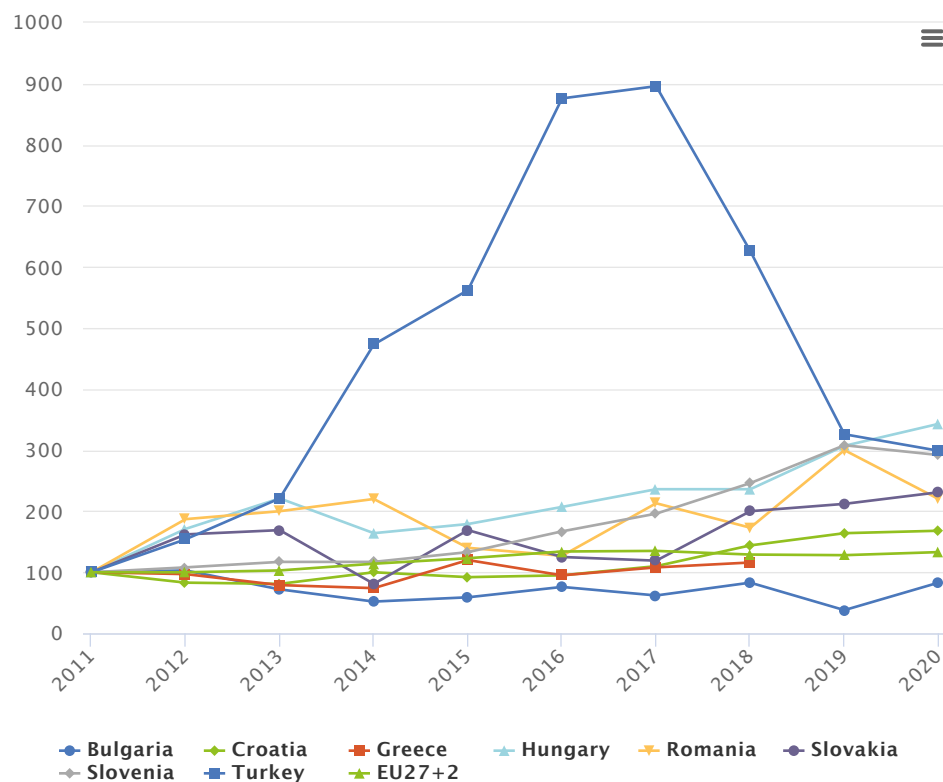


The southeast of Europe

Compared with 2011, the number of drug-related deaths has increased in seven out of eight countries in the southeast of Europe (see figure below). Only in Bulgaria, the number of drug-related deaths has slightly decreased. This trend needs to be analysed with caution as Bulgaria reports that there is some underestimation of the number of the drug-related deaths. In Turkey, the peak of drug-related deaths observed in 2016-17 was mainly related to deaths involving synthetic cannabinoids. These drugs were often found together with stimulants (MDMA, amphetamines, cocaine) and other drugs including heroin. Most deaths during this outbreak occurred among young males in their twenties and early thirties.

The recent increase observed in Slovenia relates to deaths involving opioids and cocaine mainly. The increase in Hungary relates largely to deaths involving new psychoactive substances and non-cocaine stimulants. An outbreak of deaths related to synthetic cannabinoids was reported in the summer of 2020.

Indexed trends in the number of deaths in selected countries in the south east of Europe, 2011-2020



EMCDDA (data) | Highcharts (chart tool)

2011 = 100

Note: Other countries in the southeast of Europe, with fewer than 15 cases reported in 2020 or the last year with available data, are not represented (Cyprus and Malta). When a national data point was missing for the computation of the European index trend, it was replaced by the value of the preceding year.

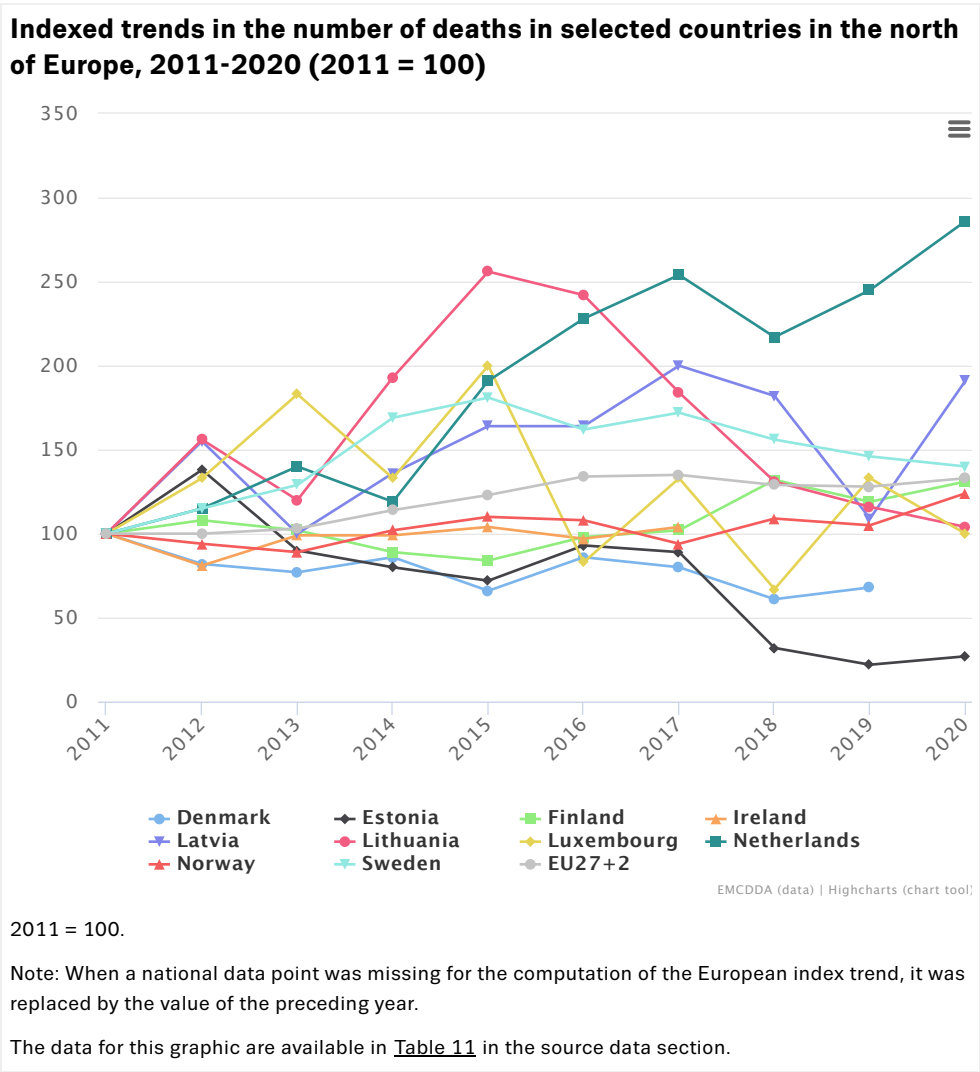
The data for this graphic are available in [Table 10](#) in the source data section.

North of Europe

The largest increases in 2020 – or the last year with available data – compared to 2011 are reported in the Netherlands, Latvia, Sweden and Finland (see figure below). In these countries, overdose deaths are mostly related to opioids and polydrug use. In Sweden, part of the peak in the number of deaths reported in 2015-2017 was due to an increase in the number of deaths associated with fentanyl. In Lithuania, most of the increase observed in the same period was due to deaths associated with opioids.

In Norway, there was an increase in the number of overdose deaths compared with 2011. Most of the deaths involve opioids. In Denmark, the most recently reported number of deaths (for 2020) was smaller than in 2011. In Estonia, an

outbreak of overdose deaths, which peaked in 2011-12, was associated with fentanyl and fentanyl derivatives. After years of police intervention, along with the implementation of treatment and new harm reduction measures (namely take-home naloxone programmes), the country observed a marked reduction in overdose deaths in the last 3 years, to levels well below those reported 10 years ago. The Netherlands reported the largest increase compared to 2011. Most deaths were related to opioids, although limited information is available on the drugs identified.



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→ Risk factors for overdose

Risk factors for overdose

What are the common situations that increase the risk of overdose?

There are individual, situational and organisational risk factors for overdoses and they can be modified to reduce fatal outcomes (Frisher et al., 2012).

Individual and situational factors include the type of drugs used, the route of administration, the use of several drugs together, age and decreased tolerance to opioids and other drugs.

The type of substance used, the route of administration and the health of the user all have an impact on the risk of overdose. Most overdose deaths are linked to the use of opioids, primarily the injection of heroin or synthetic opioids, while polydrug use is also very common, including the combination of heroin or other opioids with other central nervous system depressants, such as alcohol or benzodiazepines, which bears particularly high risks. Using/injecting alone is also a risk factor for overdose death.

A number of environmental factors increase the risk of drug overdose death, including, in the case of opioid users, lack of access to and disruption of treatment provision or discontinuity of treatment and care. In certain situations, for example following detoxification or discharge from drug-free treatment, the tolerance of drug users to opioids is greatly reduced and, as a result, they are at a particularly high risk of overdosing if they resume use. For these same reasons, an inadequate access to treatment while in prison and, thereafter, an inadequate continuity of care between prison and community life has also been identified as an important environmental risk factor (Degenhardt et al., 2014; WHO Regional Office for Europe, 2010; Zlodre and Fazel, 2012). In a cohort study in England, differences in the risk of fatal opioid poisoning were identified, which were dependent on the type of treatment received: opioid users who received only psychological support appeared to be at a greater risk than those who received opioid-agonist pharmacotherapy (opioid substitution treatment) (Pierce et al., 2016). This adds to the body of evidence that supports enrolling and retaining high-risk opioid users in opioid substitution treatment (see the EMCDDA [Best practice portal \(/best-practice\)](#)), access to harm reduction interventions and continuity between treatment in prisons and the community and at other transition points (see also in the recently published EMCDDA Insights on prison and drugs (EMCDDA, 2021b)).

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→ Preventing overdose deaths

Preventing overdose deaths

How can overdose deaths be prevented?

A multifaceted response is needed to prevent overdose deaths, as there is no single or simple intervention that will make a large impact alone. This section briefly lists the most important interventions, and provides links to more detailed resources in

this area.

Strategies to reduce drug-related deaths can include in particular the following:

- provision of large-scale opioid substitution treatment;
- promotion of quality in the care in treatment and implementation of interventions supported by evidence;
- provision of harm-reduction interventions;
- provision of drug treatment, including opioid substitution treatment, in prisons;
- development of a national overdose prevention policy, supported by long-term commitment from policymakers and funding for treatment services;
- reinforcement of the collaboration between different stakeholders in the treatment services for substance use disorders;
- interventions to reduce demand/use for drugs, particularly opioids;
- promotion of safer drug taking, such as switching from injection to inhaling opioids, not taking drugs alone, and not combining drugs, as well as taking lower doses, if tolerance may be lost;
- beyond the prevention of overdose, provision of integrated health care services, including hepatitis C treatment to people who are using drugs.

For more information on measures to reduce the risk of overdose and prevent deaths, see the [health and social responses to opioid-related deaths \(/publications/mini-guides/opioid-related-deaths-health-and-social-responses\)](#) and the EMCDDA [Best practice portal \(/best-practice/briefings/reducing-opioid-related-deaths\)](#).

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→ Methodology

Methodology

The [national focal points \(/countries\)](#) and their experts in the 27 EU Member States, Norway and Turkey report data annually to the EMCDDA through standard tables and workbooks. The annual [Statistical Bulletin \(/data/stats2021/drd_en\)](#) contains the most recent available data on the drug situation in Europe provided by the Member States, Norway and Turkey. These data sets underpin the analysis presented in the European Drug Report.

Where do the data come from?

There are two kinds of mortality registers from which cases of drug-related deaths can be retrieved and reported: general mortality registers and special mortality registers.

- **General mortality registers:** These are usually maintained by national statistical offices or health departments. They are based on the mandatory death certificates issued for all deaths by a certifying doctor. In cases of deaths with legal intervention, the certifying person is usually a forensic doctor or a coroner. These registers are limited, as often they do not have specific information on which drugs were consumed. Limitations are also due to the use of broad categories such as 'other synthetic opioids' and 'other opioids' in the coding of the cause of death in these registers.
- **Special mortality registers:** These are ideally developed specifically for drug mortality monitoring through a combination of different sources (e.g. forensic, police and other sources), which allows a high degree of detection of drug-induced deaths in a country. Alternatively, these registers are included in and maintained by existing information systems of police or medico-legal institutions (e.g. forensics institutes, coroners) for all unnatural deaths that required investigation.

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What cases are included?

The European [definition \(/publications/topic-overviews/content/faq-drug-overdose-deaths-in-europe_en#question1\)](/publications/topic-overviews/content/faq-drug-overdose-deaths-in-europe_en#question1) of drug-induced deaths is translated into a set of codes and criteria to allow the extraction of the relevant cases from mortality registers.

The extraction of cases from general mortality registers is explained in detail in the DRD [methods page \(/data/stats2021/methods/drd\)](/data/stats2021/methods/drd) of the Statistical Bulletin. Cases are counted when their underlying cause of death is mental and behavioural disorders due to psychoactive substance use or poisoning (accidental, intentional or by undetermined intent) (EMCDDA, 2010).

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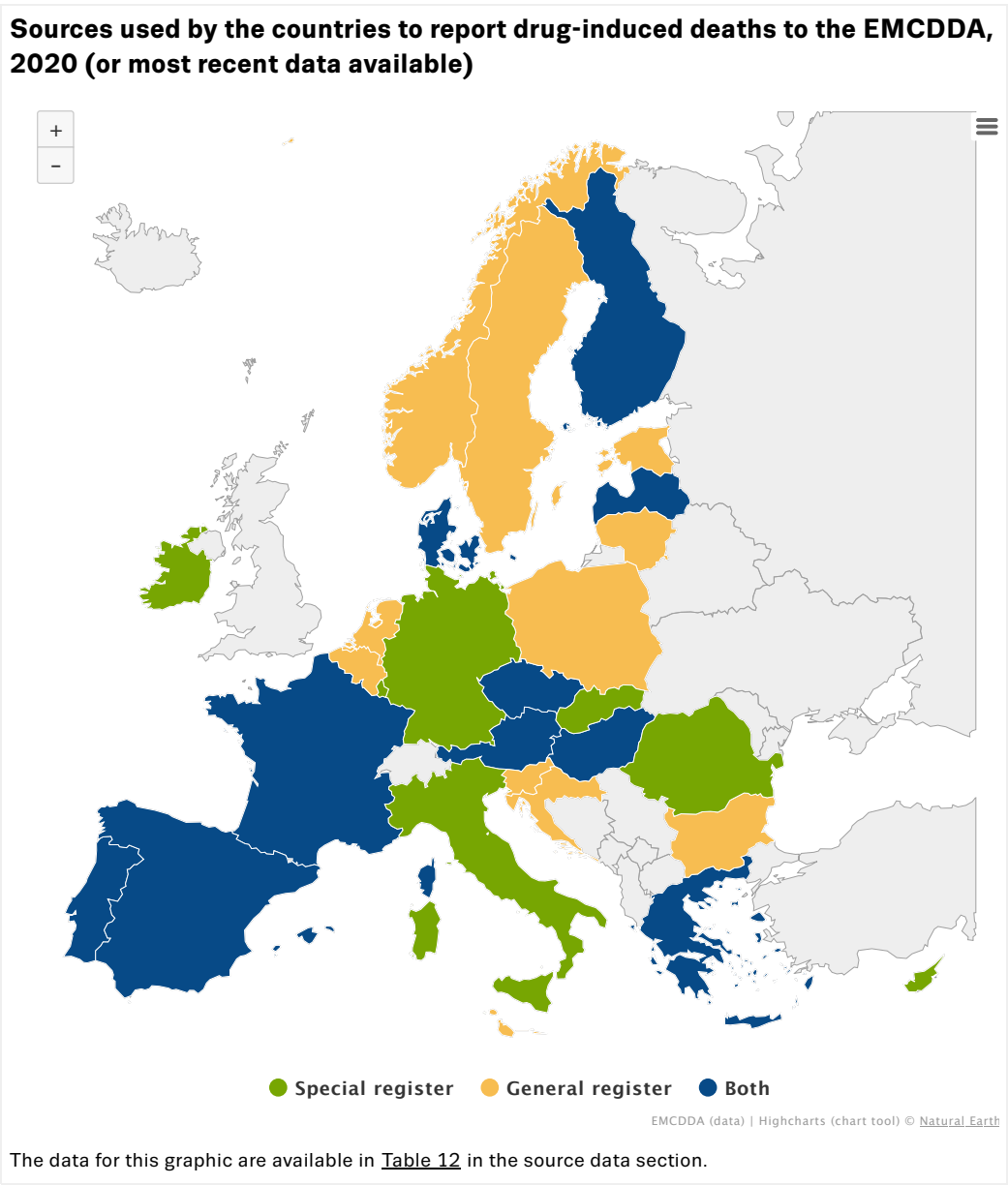
What sources of information are used in different countries?

Most countries report data from both sources (general and special registers – see map below), which allows triangulation and validation of the data.

While the trends are usually consistent between both sources (as can be seen in the [Statistical Bulletin \(/data/\)](/data/)), there can be discrepancies between the general mortality register and the special mortality register data in some countries. This can

be because the coding of the causes of deaths in the general mortality register is not sufficiently sensitive, or because the data reported from the special register do not cover the whole country.

Depending on the certification and coding procedures in the registries and also on the flux of information between the special and the general mortality registries, there are reporting delays in some countries. The most recent data (</data/stats2021/drd>) are from 2020 in 20 countries, 2019 in four countries, 2018 in two countries, 2017 in two countries and 2016 in one country (see [Table 1](#)).



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What is the preferred source of data chosen by the countries to show the details of the cases in EMCDDA publications?

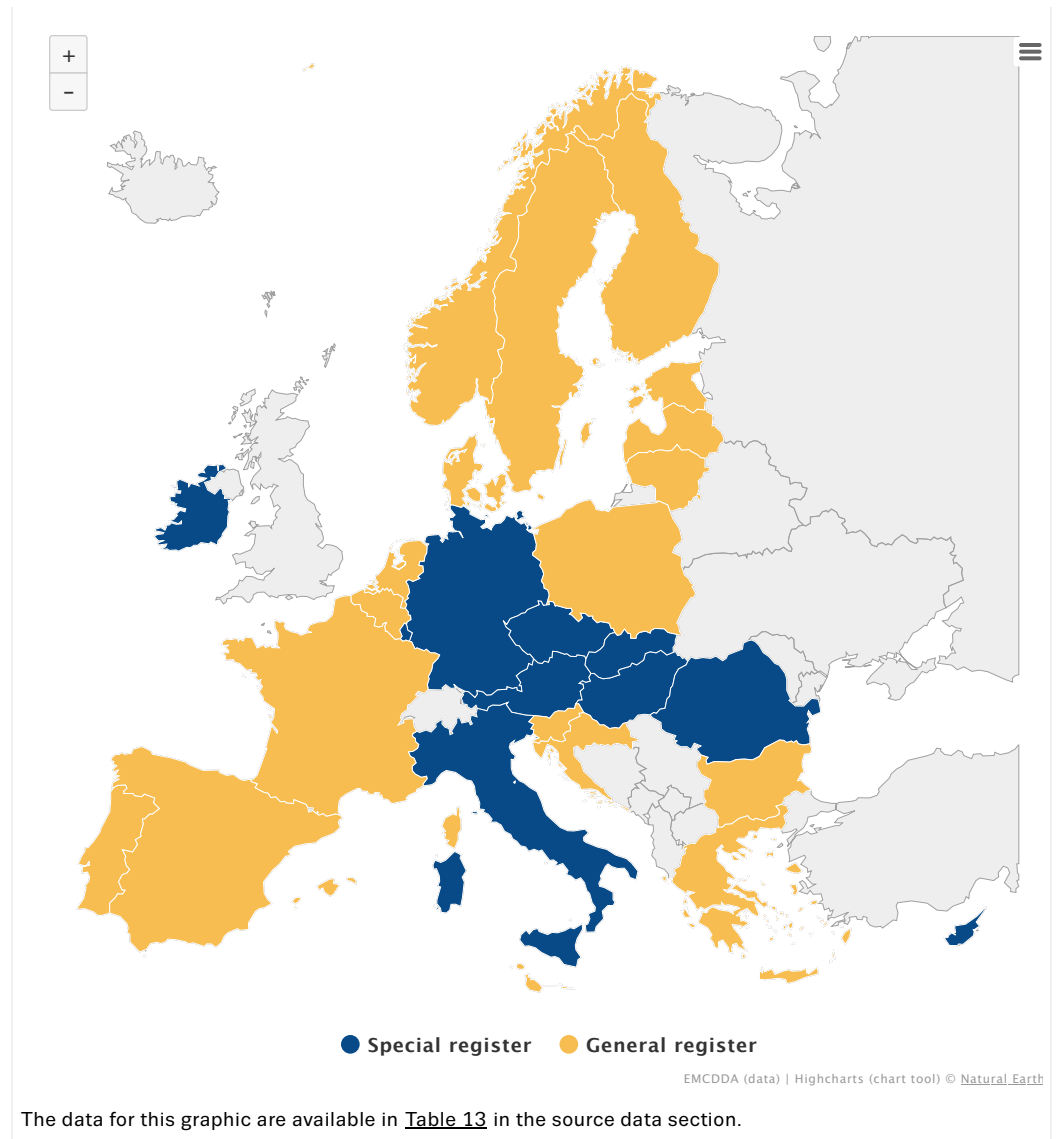
When both sources are available, the countries are asked to choose which is more valid and which should be taken as the reference for the EMCDDA [Statistical Bulletin \(/data/stats2022/drd\)](/data/stats2022/drd). The data from the selected source are then used to compute the European figures and European trends.

Meanwhile, at national level, figures from both sources (the selected source or 'national definition' and the other source) are given in the Statistical Bulletin.

Eighteen countries indicated that the general mortality register was their preferred source, while 11 preferred the special register (see map below).

In the Statistical Bulletin, when the EMCDDA definition is fully applied, the cases extracted from the general mortality register are shown under the category EMCDDA definition for the general mortality registers and those extracted from the special mortality registers are shown under the category EMCDDA definition for the special mortality registers.

Sources preferred by the countries to report drug-induced deaths to the EMCDDA, 2020 (or most recent data available)



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Are the data comparable among countries?

The differences in drug-induced death rates across regions may be explained by several factors including the different size of the population at risk, different drug taking and risk-taking patterns – including injecting drugs – different practices among drug users, and also different age-distribution and health status among drug users. There are also differences in access to health care, drug treatment and harm-reduction interventions.

Besides these, there are varying rates of post mortem examinations, varying quality in the data available about toxicology and mortality, and varying practices in coding of cause of death, including the use of 'unknown cause of death'. These are some known influential factors that might impact on the comparability of the data.

In particular, there are differences between (and within) countries with regard to the identification and certification of the cause of death, and the classification and reporting of the number of drug-induced deaths.

This relates to:

- the quality and frequency of post mortem investigations,
- the availability of this information for the determination and codification of the cause of death,
- the classification system used,
- the quality of classification,
- the coverage and quality of the overall reporting system.

Countries also have different levels of forensic laboratory capacity and different standard procedures for post mortem toxicological investigations of suspected drug-induced deaths (EMCDDA, 2019a, 2019b; Leifman, 2017; Millar, 2017). These factors have an impact on the sensitivity of analyses and hence on the comparability of the data within and across countries.

Caution is thus advised when interpreting and comparing data on drug-induced deaths over time and between countries.

Insights into the differences in post mortem toxicology investigations have been published recently (EMCDDA, 2019a).

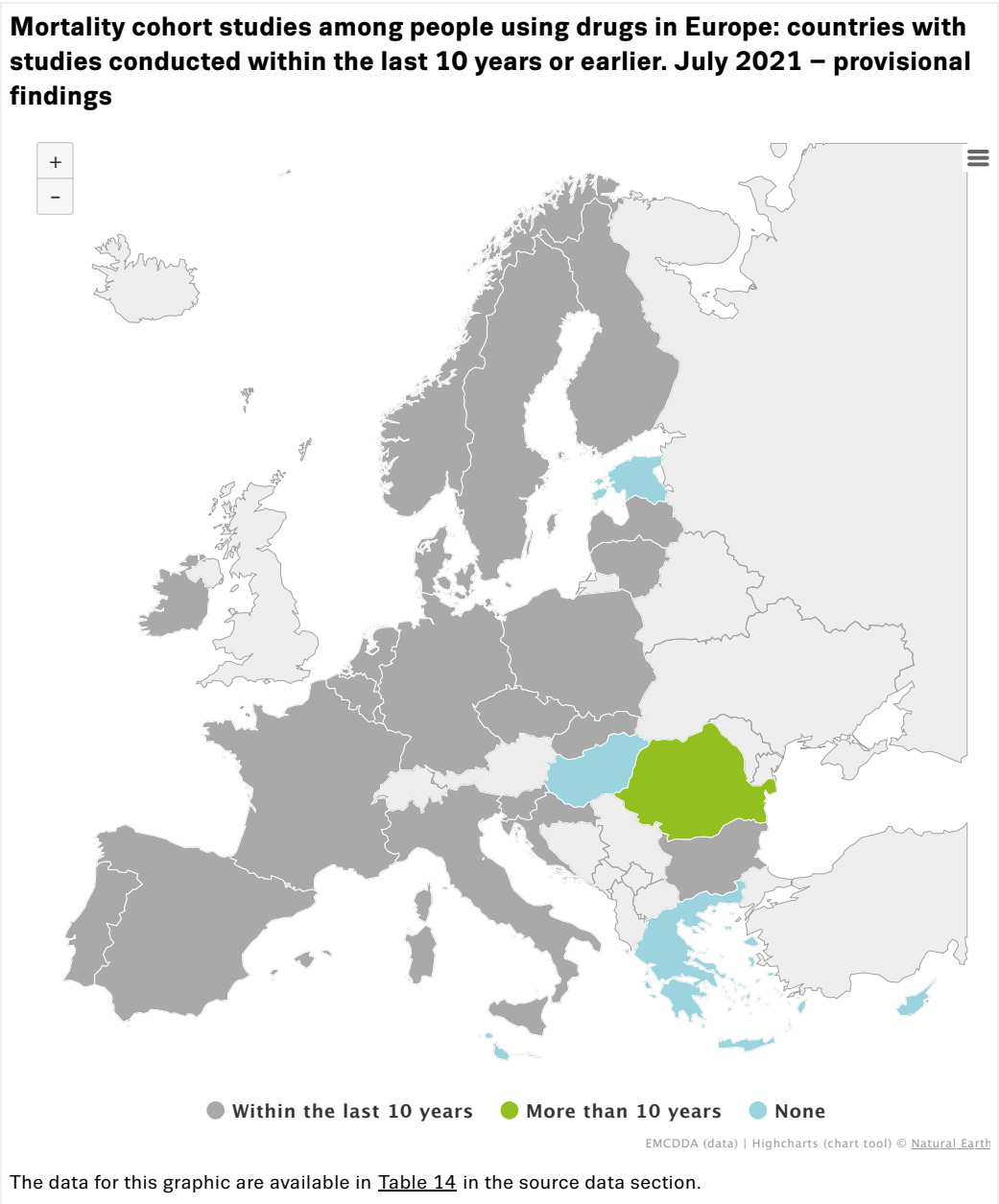
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How do we measure the overall and the cause-specific mortality rates related to drug use?

Monitoring overall mortality among high-risk drug users is the second component of the DRD epidemiological indicator. The overall or 'all-cause' mortality among high-risk drug users is investigated by means of cohort studies, which link records from death registers with records of individuals – typically from treatment registers – who are or have been using drugs (see the EMCDDA guidelines for carrying out, analysing and reporting key figures (EMCDDA, 2012)). In this way, it is possible to check the vital status of the individuals who enrolled in treatment at some point. Follow-up cohort studies also allow measurements of behaviour over time, for example the duration of treatment and interruptions, if any.

Mortality cohort studies measure the overdose mortality risk among drug users. This risk can, in turn, be applied in the estimated population of high-risk drug users in countries, in combination with the reported number of drug-induced deaths. Overdose mortality rates from cohorts can allow researchers to estimate the 'expected' number of overdose deaths in countries and can help cross-validate the reported number of overdoses in the national statistics ³(-).

The provisional findings of a mapping conducted in 2021 suggest that, for the majority of countries, there are some recent data based on cohort studies. More information is also available from the previous review of cohorts published by the EMCDDA (2015).



³
(–) More information on the methods was presented during the annual DRD expert meeting in 2019 (Vicente and Giraudon, 2019).

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→ Resources Resources

For further methodological information and the most recent EMCDDA data in this area consult the [Statistical Bulletin 2022 – methods and definitions for overdose deaths \(/data/stats2022/methods/drd\)](#).

The European network of drug-related deaths experts supports the EMCDDA's work on the DRD key epidemiological indicator. The network meets each year to share and discuss new data, studies and experiences at regional, national and European level.

Details of the 2021 meeting (meeting report) are available on the [EMCDDA website \(/publications/technical-reports/drug-related-deaths-and-mortality-europe-meeting-report-2021_en\)](#).

The findings of the 2019 meeting were published recently (EMCDDA, 2021c).

All EMCDDA publications are available online at <https://www.emcdda.europa.eu/publications> (/publications).

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Source data for figures

Year of most recent overdose data

Country	Country code	Year

Austria	AT	2020
Belgium	BE	2017 or ealier
Bulgaria	BG	2020
Croatia	HR	2020
Cyprus	CY	2020
Czechia	CZ	2020
Denmark	DK	2019
Estonia	EE	2020
Finland	FI	2020
France	FR	2017 or ealier
Germany	DE	2020
Greece	EL	2018
Hungary	HU	2020
Ireland	IE	2017 or ealier
Italy	IT	2020
Latvia	LV	2020
Lithuania	LT	2020
Luxembourg	LU	2020
Malta	MT	2018
Netherlands	NL	2020
Norway	NO	2020
Poland	PL	2019
Portugal	PT	2019
Romania	RO	2020
Slovakia	SK	2020
Slovenia	SI	2020
Spain	ES	2019
Sweden	SE	2020
Turkey	TR	2020

Table 1. Drug-induced deaths in the European Union, Norway and Turkey: total number among adults aged 15-64 years, 2020

Country	Year	Number
Germany (1)	2020	1581
Spain	2019	545
Sweden	2020	470

France	2016	391
Turkey	2020	309
Italy	2020	305
Norway	2020	297
Greece	2018	263
Netherlands	2020	261
Finland	2020	248
Ireland	2017	227
Austria	2020	190
Poland	2019	168
Denmark	2019	162
Belgium	2017	139
Croatia	2020	98
Portugal	2019	68
Slovenia	2020	62
Czechia	2020	54
Hungary	2020	48
Lithuania	2020	47
Slovakia	2020	34
Romania	2020	33
Estonia	2020	32
Bulgaria	2020	23
Latvia	2020	21
Cyprus	2020	6
Luxembourg	2020	6
Malta	2018	3

⁽¹⁾ No age breakdown was available in 2019 for Germany, therefore all cases are counted instead of only those aged 15-64 years.

Table 2. Drug-induced mortality rates per million among adults (15-64): selected trends

Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	33	35	28	24	21	26	28	26	31	33	32
Croatia	25	21	16	17	21	19	20	23	30	37	37
Denmark	64	76	61	58	63	50	62	53	43	44	
Estonia	112	138	192	127	113	102	132	130	43	30	38

Finland	42	53	58	54	47	43	53	55	72	65	72
Norway	74	77	70	68	76	82	75	66	77	73	85
Slovenia	18	17	18	20	20	22	29	32	41	51	46
Sweden	56	57	65	72	96	103	90	94	84	77	73
EU27+2	14	13	13	14	15	16	17	18	16	15	15

⁽¹⁾ No age breakdown was available for Germany.

Table 3. Drug-induced mortality rates per million among adults (15-64)

Country	Year	Mortality rate - Females	Mortality rate - Males	Mortality rate - Total
Austria	2020	10-40	>40	10-40
Belgium	2017	10-40	10-40	10-40
Bulgaria	2020	<10	<10	<10
Croatia	2020	10-40	>40	10-40
Cyprus	2020	<10	10-40	10-40
Czechia	2020	<10	10-40	<10
Denmark	2019	10-40	>40	>40
Estonia	2020	10-40	>40	10-40
Finland	2020	10-40	>40	>40
France	2016	<10	10-40	<10
Germany	2017	<10	10-40	10-40
Greece	2018	<10	>40	10-40
Hungary	2020	<10	10-40	<10
Ireland	2017	>40	>40	>40
Italy	2020	<10	10-40	<10
Latvia	2020	<10	10-40	10-40
Lithuania	2020	<10	>40	10-40
Luxembourg	2020	<10	10-40	10-40
Malta	2018	<10	10-40	<10
Netherlands	2020	10-40	10-40	10-40
Norway	2020	>40	>40	>40
Poland	2019	<10	<10	<10
Portugal	2019	<10	10-40	10-40
Romania	2020	<10	<10	<10
Slovakia	2020	<10	10-40	<10
Slovenia	2020	10-40	>40	>40

Spain	2019	<10	10-40	10-40
Sweden	2020	10-40	>40	>40
Turkey	2020	<10	10-40	<10

Note: No age break down available in Germany.

Table 4. Proportion of males among drug-related deaths in the European Union, Norway and Turkey, 2020

Country	Year	Proportion	Proportion (categories)	Total cases
Austria	2020	75	75-85	191
Belgium	2017	68	<75	148
Bulgaria	2020	88	>85	24
Croatia	2020	79	75-85	99
Cyprus	2020	83	75-85	6
Czechia	2020	78	75-85	58
Denmark	2019	68	<75	202
Estonia	2020	85	75-85	33
Finland	2020	78	75-85	258
France	2016	78	75-85	465
Germany	2017	85	75-85	1125
Greece	2018	86	>85	274
Hungary	2020	98	>85	48
Ireland	2017	70	<75	235
Italy	2020	87	>85	308
Latvia	2020	95	>85	21
Lithuania	2020	91	>85	47
Luxembourg	2020	67	<75	6
Malta	2018	100	>85	3
Netherlands	2020	76	75-85	295
Norway	2020	69	<75	324
Poland	2019	63	<75	212
Portugal	2019	81	75-85	72
Romania	2020	85	75-85	33
Slovakia	2020	84	75-85	37
Slovenia	2020	84	75-85	70
Spain	2019	82	75-85	546
Sweden	2020	71	<75	524

Turkey	2020	93	>85	314
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Note: The total number of cases is low in some countries (fewer than 20 cases reported in Bulgaria, Cyprus, Latvia, Luxembourg and Malta). No age and gender breakdown was reported for Germany in 2019.

Table 5. Distribution of drug-induced deaths reported in 2012 and in 2020, or most recent year, by age group

Age	2012	2020
15-19	87	145
20-24	346	341
25-29	614	490
30-34	775	735
35-39	699	863
40-44	594	712
45-49	516	676
50-54	288	522
55-59	192	305
60-64	89	213
65+	147	311

Table 6. Distribution of drug-induced deaths reported in 2020, or most recent year, by age group and by country

Country	Year	Females <30	Females 30-39	Females 40+	Males <30	Males 30-39	Males 40+	Total <30	Total 30-39	Total 40+
Austria	2020	19	17	11	52	52	40	71	69	51
Belgium	2017	7	13	27	16	24	61	23	37	88
Bulgaria	2020	2	1	0	4	13	4	6	14	4
Croatia	2020	2	4	15	5	35	38	7	39	53
Cyprus	2020	0	0	1	3	1	1	3	1	2
Czechia	2020	2	4	7	9	17	19	11	21	26
Denmark	2019	4	6	55	17	21	99	21	27	154
Estonia	2020	2	2	1	3	19	6	5	21	7
Finland	2020	19	9	28	98	41	63	117	50	91
France	2016	7	16	81	42	111	208	49	127	289
Germany	2017							206	423	496

Greece	2018	1	13	24	23	107	106	24	120	130
Hungary	2020	1	0	0	25	15	7	26	15	7
Ireland	2017	6	24	40	31	56	78	37	80	118
Italy	2020	15	9	17	44	71	152	59	80	169
Latvia	2020	0	1	0	4	11	5	4	12	5
Lithuania	2020	2	2	0	8	20	15	10	22	15
Luxembourg	2020	0	1	1	1	1	2	1	2	3
Malta	2018	0	0	0	0	3	0	0	3	0
Netherlands	2020	5	10	56	34	42	148	39	52	204
Norway	2020	17	14	69	44	46	134	61	60	203
Poland	2019	17	15	47	38	49	46	55	64	93
Portugal	2019	0	2	12	4	15	39	4	17	51
Romania	2020	1	4	0	6	15	7	7	19	7
Slovakia	2020	0	2	4	9	14	8	9	16	12
Slovenia	2020	0	2	9	10	21	28	10	23	37
Spain	2019	10	12	77	47	113	287	57	125	364
Sweden	2020	29	32	93	98	105	167	127	137	260
Turkey	2020	10	8	3	118	98	73	128	106	76

Table 7. Proportion of drug-induced deaths among older (40+ years) people in the European Union, Norway and Turkey, 2020 (or most recent data available)

Country	Proportion
Austria	<30%
Belgium	>50-60%
Bulgaria	<30%
Croatia	>50-60%
Cyprus	30-50%
Czechia	30-50%
Denmark	>60%
Estonia	<30%
Finland	30-50%
France	>60%
Germany	30-50%
Greece	30-50%
Hungary	<30%
Ireland	30-50%

Italy	>50-60%
Latvia	<30%
Lithuania	30-50%
Luxembourg	30-50%
Malta	<30%
Netherlands	>60%
Norway	>60%
Poland	30-50%
Portugal	>60%
Romania	<30%
Slovakia	30-50%
Slovenia	>50-60%
Spain	>60%
Sweden	30-50%
Turkey	<30%

Table 8. Proportion of drug-induced deaths among older (40+ years) people in the European Union, Norway and Turkey, 2020 (or most recent data available)

Country	Proportion (categories)
Austria	>30%
Belgium	15-25%
Bulgaria	15-25%
Croatia	<15%
Cyprus	>30%
Czechia	15-25%
Denmark	<15%
Estonia	15-25%
Finland	>30%
France	<15%
Germany	15-25%
Greece	<15%
Hungary	>30%
Ireland	15-25%
Italy	15-25%
Latvia	15-25%

Lithuania	15-25%
Luxembourg	15-25%
Malta	<15%
Netherlands	<15%
Norway	15-25%
Poland	>25-30%
Portugal	<15%
Romania	15-25%
Slovakia	15-25%
Slovenia	<15%
Spain	<15%
Sweden	15-25%
Turkey	>30%

Table 9. Proportion of drug-induced deaths with opioids involved in the European Union, Norway and Turkey, 2020 (or most recent data available)

Country	Year	Proportion	Proportion (categories)	Type of register
Austria	2020	91	>80%	Special register
Belgium	2017	49	<50	General register
Bulgaria	2020	20	<50	General register
Croatia	2020	87	>80%	General register
Cyprus	2020	67	50-80%	Special register
Czechia	2020	51	50-80%	Special register
Denmark	2019	100	>80%	General register
Estonia	2020	58	50-80%	General register
Finland	2020	85	>80%	General register
Germany	2020	66	50-80%	Special register
Greece	2018	75	50-80%	General register
Hungary	2020	10	<50	Special register
Ireland	2017	87	>80%	Special register
Italy	2020	70	50-80%	Special register
Latvia	2020	80	50-80%	General register
Lithuania	2020	47	<50	General register
Luxembourg	2020	100	>80%	Special register
Malta	2018	33	<50	General register
Netherlands	2020	56	50-80%	General register

Norway	2020	84	>80%	General register
Romania	2020	91	>80%	Special register
Slovakia	2020	57	50-80%	Special register
Slovenia	2020	71	50-80%	General register
Sweden	2020	88	>80%	General register
Turkey	2020	41	<50	Special register

Although toxicology data are not available for France, Spain, Portugal and Poland through the general mortality registers, data from the forensic special mortality registers suggest that most drug-induced deaths in these countries involved opioids.

Table 10. Indexed trends in the number of deaths in selected countries in the south east of Europe, 2011-2020 (2011 = 100)

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bulgaria	100	103	72	52	59	76	62	83	38	83
Croatia	100	83	81	100	92	95	110	144	164	168
Greece	100	97	79	74	120	95	108	116		
Hungary	100	171	221	164	179	207	236	236	307	343
Romania	100	187	200	220	140	127	213	173	300	220
Slovakia	100	162	169	81	169	125	119	200	212	231
Slovenia	100	108	117	117	133	167	196	246	308	292
Turkey	100	154	221	473	562	876	896	626	326	299
EU27+2	100	100	103	114	123	134	135	129	128	133

Note: Other countries in the southeast Europe, with fewer than 15 cases reported in 2019 or last year with available data, are not represented (Bulgaria, Cyprus and Malta). When a national data point was missing for the computation of the European index trend, it was replaced by the value of the preceding year.

Indexed trends in the number of deaths in selected countries in the north of Europe, 2011-2020 (2011 = 100)

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Denmark	100	82	77	86	66	86	80	61	68	
Estonia	100	138	90	80	72	93	89	32	22	27
Finland	100	108	102	89	84	98	102	132	119	131
Ireland	100	81	99	99	104	97	104			
Latvia	100	155	100	136	164	164	200	182	109	191

Lithuania	100	156	120	193	256	242	184	131	116	104
Luxembourg	100	133	183	133	200	83	133	67	133	100
Netherlands	100	115	140	119	191	228	254	217	245	286
Norway	100	94	89	102	110	108	94	109	105	124
Sweden	100	115	129	169	181	162	172	156	146	140
EU27+2	100	100	103	114	123	134	135	129	128	133

Note: other countries in the north of Europe, with fewer than 15 cases reported in 2019 or last year with available data are not represented (Luxembourg and Latvia). When a national data point was missing for the computation of the European index trend, it was replaced by the value of the preceding year.

Table 12. Sources used by the countries to report drug-induced deaths to the EMCDDA, 2020 (or most recent data available)

Country	Year	Available sources
Austria	2020	Both
Belgium	2017	General register
Bulgaria	2020	General register
Croatia	2020	General register
Cyprus	2020	Special register
Czechia	2020	Both
Denmark	2019/2020	Both
Estonia	2020	General register
Finland	2020	Both
France	2016/2019	Both
Germany	2020	Special register
Greece	2018/2020	Both
Hungary	2020	Both
Ireland	2017	Special register
Italy	2020	Special register
Latvia	2020	Both
Lithuania	2020	General register
Luxembourg	2020	Special register
Malta	2018	General register
Netherlands	2020	General register
Norway	2020	General register
Poland	2019	General register

Portugal	2019/2020	Both
Romania	2020	Special register
Slovakia	2020	Special register
Slovenia	2020	General register
Spain	2019	Both
Sweden	2020	General register
Turkey	2020	Special register

Table 13. Sources preferred by the countries to report drug-induced deaths to the EMCDDA, 2020 (or most recent data available)

Country	Year	Preferred source
Austria	2020	Special register
Bulgaria	2020	General register
Croatia	2020	General register
Cyprus	2020	Special register
Czechia	2020	Special register
Belgium	2017	General register
Denmark	2019/2020	General register
Estonia	2020	General register
Finland	2020	General register
France	2016/2019	General register
Germany	2020	Special register
Greece	2018/2020	General register
Hungary	2020	Special register
Italy	2020	Special register
Latvia	2020	General register
Lithuania	2020	General register
Luxembourg	2020	Special register
Netherlands	2020	General register
Norway	2020	General register
Poland	2019	General register
Malta	2018	General register
Ireland	2017	Special register
Portugal	2019/2020	General register
Romania	2020	Special register

Slovakia	2020	Special register
Slovenia	2020	General register
Sweden	2020	General register
Turkey	2020	Special register
Spain	2019	General register

Table 14. Mortality cohort studies among people using drugs in Europe: countries with studies conducted within the last 10 years or earlier. June 2021 – provisional findings

Country	Last study
Belgium	Within the last 10 years
Bulgaria	Within the last 10 years
Croatia	Within the last 10 years
Cyprus	None
Czechia	Within the last 10 years
Denmark	Within the last 10 years
Estonia	None
Finland	Within the last 10 years
France	Within the last 10 years
Germany	Within the last 10 years
Greece	None
Hungary	None
Ireland	Within the last 10 years
Italy	Within the last 10 years
Latvia	Within the last 10 years
Lithuania	Within the last 10 years
Luxembourg	Within the last 10 years
Malta	None
Netherlands	Within the last 10 years
Poland	Within the last 10 years
Portugal	Within the last 10 years
Romania	More than 10 years
Slovakia	Within the last 10 years
Slovenia	Within the last 10 years
Spain	Within the last 10 years
Sweden	Within the last 10 years
Turkey	None

Norway	Within the last 10 years
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Table 15. Countries included in the ‘southeast’ and ‘north’ of Europe for this trend analysis

Country	Region
Bulgaria	Southeast
Croatia	Southeast
Cyprus	Southeast
Denmark	North
Estonia	North
Finland	North
Greece	Southeast
Hungary	Southeast
Ireland	North
Latvia	North
Lithuania	North
Luxembourg	North
Malta	Southeast
Netherlands	North
Norway	North
Romania	Southeast
Slovakia	Southeast
Slovenia	Southeast
Sweden	North
Turkey	Southeast

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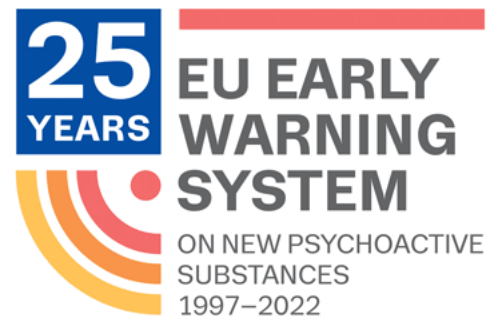
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